

38. (Twice Amended) A culture of the non-adherent cells of claim 49, wherein said cells express nestin.

41. (Amended) A cell of any of the claims 49-53, said cell transfected with a heterologous gene.

42. (Reiterated) The precursor cell of claim 41, wherein said gene encodes a trophic factor.

43. (Amended) A mitotic cell that is the progeny of a cell of any of the claims 49-53.

44. (Amended) A differentiated cell that is the progeny of a cell of any of the claims 49-53.

45. (Reiterated) The differentiated cell of claim 44, wherein said cell is selected from the group consisting of a neuron, an astrocyte, and an oligodendrocyte.

46. (Twice Amended) A pharmaceutical composition comprising a mitotic or differentiated cell that is the progeny of a stem cell isolated from a peripheral tissue of a postnatal mammal, wherein said peripheral tissue comprises a sensory receptor, and a pharmaceutically acceptable carrier, auxiliary or excipient.

47. (Twice Amended) A pharmaceutical composition comprising a stem cell isolated from a peripheral tissue of a postnatal mammal, wherein said peripheral tissue comprises a sensory receptor, and a pharmaceutically acceptable carrier, auxiliary or excipient.

49. (Twice Amended) A stem cell of a mammal, said stem cell produced by a method comprising the steps of:

- (a) providing a culture of peripheral tissue containing sensory receptors from said mammal;
- (b) isolating a stem cell from said peripheral tissue, based on the tendency of said cell to aggregate and form non-adherent clusters in culture, said stem cell capable of producing neurons and glia; and
- (c) transplanting said stem cell into the central nervous system of said mammal.

Please add the following new claims:

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50. (New) A cellular composition comprising a purified population of mammalian stem cells, which stem cells form non-adherent clusters in culture, are self renewing, express nestin and glutamic acid decarboxylase (GAD), and differentiate into cell types of the central nervous system.
51. (New) A cellular composition comprising a purified population of mammalian stem cells, which stem cells form non-adherent clusters in culture, are self renewing, express nestin; and differentiate into dopaminergic neurons.
52. (New) A cellular composition comprising a purified population of mammalian stem cells, which stem cells form non-adherent clusters in culture, are self renewing; proliferate in an EGF-independent manner, and differentiate into cell types of the central nervous system.
53. (New) A cellular composition comprising stem cells prepared by the method comprising:  
(a) culturing a dissociated sample of epithelial tissue;  
(b) isolating, from the culture, non-adherent neural stem cells that are self renewing, proliferate in an EGF-independent manner, and differentiate into cell types of the central nervous system.
54. (New) The cellular composition of any of the claims 50, 51, or 53, which stem cells proliferate in an EGF-independent manner.
55. (New) The cellular composition of claim 54, which stem cells differentiate, in the presence of serum, into neurons expressing tyrosine hydroxylase.
56. (New) The cellular composition of any of the claims 49-54, which stem cells differentiate into cells expressing one or markers selected from the group consisting of Glial Fibrillary Acid

Protein (GFAP), neurofilament 160,  $\beta$  III tubulin, NeuN, galactocerebroside, tyrosine hydroxylase and dopamine  $\beta$ -dehydrogenase.

57. (New) The cellular composition of any of the claims 49-54, which stem cells differentiate, in the presence of serum, into dopaminergic cells.

58. (New) The cellular composition of any of the claims 49-54, which stem cells are human stem cells.

59. (New) A cellular composition of differentiated cells of claim 44, 49-54, wherein said differentiated cells expresses tyrosine hydroxylase.

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60. (New) The cellular composition comprising of any of claims 49-54, formulated in a pharmaceutically acceptable carrier, auxiliary or excipient.

61. (New) A method for conducting a business for isolating stem cells, comprising:

- (a) obtaining an epithelial tissue sample from a patient;
- (b) culturing a dissociated sample of the epithelial tissue;
- (c) isolating, from the culture, neural stem cells that are non-adherent, self renewing, proliferate in an EGF-independent manner, and differentiate into cell types of the central nervous system.
- (d) preserving the stem cells for later retrieval.

62. (New) The method of claim 61, further comprising the step of differentiating the stem cells into one or more cell types of the CNS.

63. (New) The method of claim 61, which differentiated cells express one or markers selected from the group consisting of Glial Fibrillary Acid Protein (GFAP), neurofilament 160,  $\beta$  III tubulin, NeuN, galactocerebroside, tyrosine hydroxylase and dopamine  $\beta$ -dehydrogenase.

The amended claims are restated below to reflect changes from the last filing

38. (Twice Amended) [The cell] A culture of the non-adherent cells of claim 49, wherein said [cell expresses] cells express nestin.
41. (Amended) [The] A cell of any of the claims[claim] 49-53, said cell transfected with a heterologous gene.
43. (Amended) A mitotic cell that is the progeny of [the] a cell of any of the claims[claim] 49-53.
44. (Amended) A differentiated cell that is the progeny of [the] a cell of any of the claims[claim] 49-53.
46. (Twice Amended) A pharmaceutical composition comprising a mitotic or differentiated cell that is the progeny of a [neural] stem cell isolated from a peripheral tissue of a postnatal mammal, wherein said peripheral tissue comprises a sensory receptor, and a pharmaceutically acceptable carrier, auxiliary or excipient.
47. (Twice Amended) A pharmaceutical composition comprising a [neural] stem cell isolated from a peripheral tissue of a postnatal mammal, wherein said peripheral tissue comprises a sensory receptor, and a pharmaceutically acceptable carrier, auxiliary or excipient.
49. (Twice Amended) A [neural] stem cell [in the central nervous system] of a mammal, said [neural] stem cell produced by a method [of] comprising the steps of:
- (a) providing a culture of peripheral tissue containing sensory receptors from said mammal;
  - (b) isolating a [neural] stem cell from said peripheral tissue, based on the tendency of said cell to aggregate and form non-adherent clusters in culture, said [neural] stem cell capable of producing neurons and glia; and
  - (c) transplanting said [neural] stem cell into the central nervous system of said mammal.